Title: METHOD FOR GENERATING HASHES FROM A COMPRESSED MULTIMEDIA CONTENT

REMARKS

This communication responds to the Final Office Action dated May 5, 2010. Claims 1, 11, and 15 are amended, no claims are canceled, and no claims are added in this communication. As a result, claims 1, 3-11, and 15 are now pending in this Application.

Examiner's Interview Summary

The Applicant would like to thank Examiner Sarah Su for the courtesy of conducting a telephone interview on June 24, 2010 with patent attorney Mark Muller. During the interview, the claims and the operation of various embodiments described in the specification were discussed, as well as the Davis reference. An agreement was reached that the independent claims might be amended to place them in condition for allowance. The claims have been amended in accordance with this discussion.

The Rejection of Claims Under § 103

Claims 1, 3-6, 8, 11, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Iverson et al. (US Patent 5,852,664 and Iverson hereinafter) in view of Hampapur et al. (US 2001/0003468 A1 and Hampapur hereinafter) and further in view of Davis (US Patent 5,907,619). Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iverson in view of Hampapur and Davis as applied to claim 6 above, and further in view of Makiyama et al. (US Patent 6,687,409 81 and Makiyama hereinafter). Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iverson in view of Hampapur and Davis as applied to claim 1 above, and further in view of Krapp et al. (US 2002/0169934 A1 and Krapp hereinafter). Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Iverson in view of Hampapur and Davis as applied to claim 1 above, and further in view of Levine (US Patent 6,266,644 81). Because a proper prima facie case of anticipation has not been established in each case, these rejections are respectfully traversed.

The Office asserts that "Davis discloses a system and method for compressing and digitally signing compressed video data, the system and method having; calculating a separate hash word from said parameters for each time frame (col. 6, lines 32-33); deriving a hash

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function by a concatenation of the hash words (col. 6, lines 33-35)." The Office goes on to state that "... since it is well known that frame sizes can vary in terms of time (i.e. 1/24, 1/25, or 1/30 of a second), an image frame may be of any time length ..." and that since "Davis discloses that each section [of the image] is hashed to create unique digests that are concatenated for each image frame, this process would also be applicable to the other sequential frames as created in the compression process (col. 6, lines 32-35) thus creating a hash for each frame."

In reply, it is respectfully noted that image frames themselves have no "length". The frame rate, or frame frequency, is the frequency (rate) at which an imaging device produces unique consecutive images called frames. Thus, while a new image frame may be presented to the viewer every 1/30 of a second, for example, each frame individually captures an instant in time - such that time is essentially "frozen" for the instant of capture. By capturing a sequence of images, and presenting them over time, the impression of movement is created, and activity over the time of presentation can then be conveyed.

This explanation is in accordance with the specification as originally filed. For example, the Office is invited to review pg. 9 of the application at lines 18-21:

"Many encoding schemes will divide multimedia signals simultaneously into predetermined time frames, and blocks of perceptual features for each time frame. For instance, a video signal may, for each image, be divided into square blocks of pixels. Equally, an audio signal may be divided into predetermined frequency bands."

That is, a single image may be equivalent to a single "time frame", and pixel blocks may constitute the perceptual features of that image, as a time frame. This is in direct contrast to what is proposed by the Office, where sections of an image are purported to be equivalent in function to the claimed plurality of time frames.

Second, it is respectfully noted that the process taught by Davis is essentially to create an individual digest for each portion of a frame, and to concatenate each of these into a single hash sequence table. See Davis, Col. 6, lines 20-49. This is not what is claimed, however.

Thus, it appears the nature of the claimed invention may have been misunderstood. To clarify the meaning of the terms used in the claims, and not for reasons related to patentability, each of the independent claims has been amended to include the following language:

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"calculating a separate hash word from said parameters for each time frame to provide a set of hash words over a period of time encompassed by the plurality of time frames" (claims 1 and 11) and "calculate a separate hash word from said parameters for each time frame to provide a set of hash words over a period of time encompassed by the plurality of time frames" (claim 15).

The revised language should make clear that individual hash words are calculated over separate time frames that, taken together, make up a period of time that is covered by the set of concatenated hash words. Davis, either alone or in conjunction with the other cited references, does not provide this teaching.

In summary, Davis does not teach or suggest what is recited in the independent claims, and these claims should therefore be in condition for allowance. The dependent claims should also be in condition for allowance, since any claim depending from a nonobvious independent claim is also nonobvious. See M.P.E.P. §2143.03. The rejections under 35 USC § 103(a) are therefore improper, and reconsideration/allowance is respectfully requested.

CONCLUSION

It is respectfully urged that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone the undersigned at (210) 308-5677 to facilitate prosecution of this Application. If necessary, please charge any additional fees or deficiencies, or credit any overpayments to Deposit Account No. 19-0743.

Respectfully submitted,

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Reg. No. 37,509

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being filed using the USPTO's electronic filing system EFS-Web, and is addressed to: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 28 day of July, 2010. 1 Jan 1. Sont Washalf 1

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